COMPACT MIXER

MM1002a / MM1202a

USER'S MANUAL

PHONIC
WWW.PHONIC.COM

!!! WARNING !!!

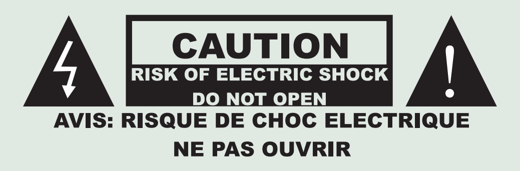
TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK,

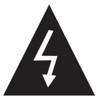
DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE.

Avoid exposing rain, water, or any form of liquid to this unit. IMMEDIATELY unplug its power cord from its power source and contact a qualified technician when the unit is exposed to rain, water, or any form of liquid.

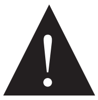
Keep the unit is away from heat sources like radiators, heat registers, stoves and etc.

ALWAYS have a qualified technician present when repairing or modifying this unit.





The arrowhead lightning flash symbol within an equilateral triangle is intended to alert you to the presence of uninsulated “dangerous voltage” inside the enclosure that may be sufficient to constitute a risk of shock.



The exclamation point within an equilateral triangle is intended to remind you to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

!!! CAUTION !!!

TO REDUCE THE RISK OF ELECTRIC SHOCK,

DO NOT REMOVE THE COVER OR THE BACK OF THE UNIT.

No user-serviceable parts inside. Always contact a qualified technician for repair or modification.

DO NOT open, modify, or disassemble the unit without a qualified technician present. Any change or repair of the unit requires the present of a qualified technician in order for the warranty to remain effective.

Clean the unit with damp cloth and dry brush. No other solvents are recommended for cleaning. Routine cleaning and proper maintenance guarantee best performance from the unit.

Carefully packed at the manufacturing site, the packing box is designed to protect the unit from rough handling. Please carefully examine the content inside the package and make sure the unit is well, undamaged.

Notify your dealer and the shipping company immediately when you find the unit damaged from shipping. Claims for damage or replacement would only be granted when reported properly and in a timely manner.

Use damp cloth or dry brush to clean the unit. **DO NOT** use any other solvents for cleaning. Good care and maintenance of your unit will prolong your unit’ s operational life and insure its optimal performance.

MM1002a 1202a

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INTRODUCTION

Congretulation on your purchase of the MM series Mixers. The MM series is built into a rugged construction, which is ideal for small live gigs, recording and fixed PA installtion. In order to get the best perfomacne from the mixer, please read this user manual carefully, and get yourself familiar with new and different functions on this uniit.

FEATURE

MM1002a

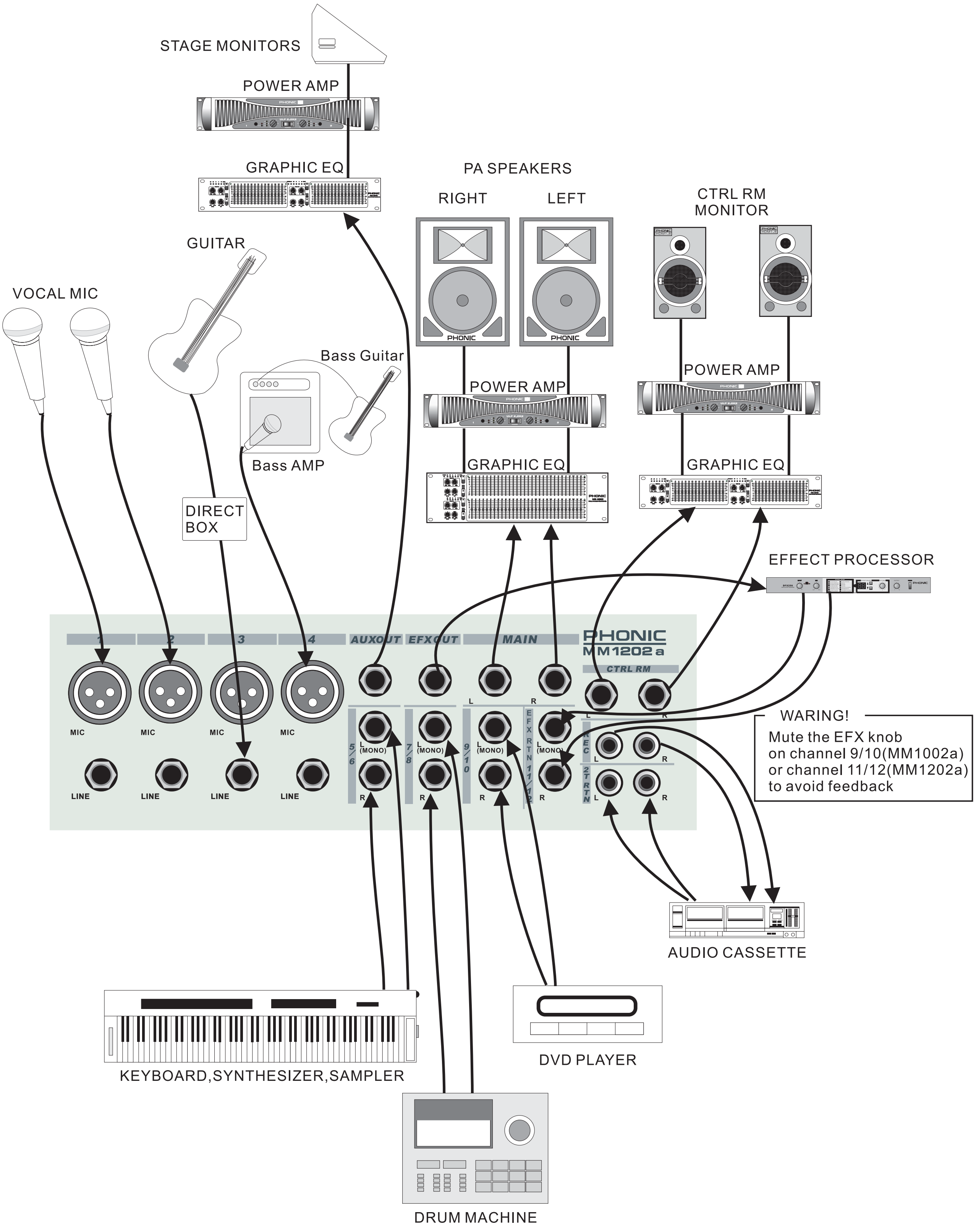
- 2 balanced Mic/Line input channels with 3-band EQ
- 4 stereo inputs
- Additional 2T return inputs, for tape input or link to submixer, can be routed to MAIN l/R and CTRL RM/Headphones
- Global +48V phantom power switch
- Post-Fader EFX send on every input channel
- REC output
- 5 segement level meter and with switch for MAIN L/R and CTRL RM/Headphones
- CTRL RM/Headphone output with volume control
- 60mm fader control for MAIN L/R output
- Balanced MAIN L/R output

MM1202a

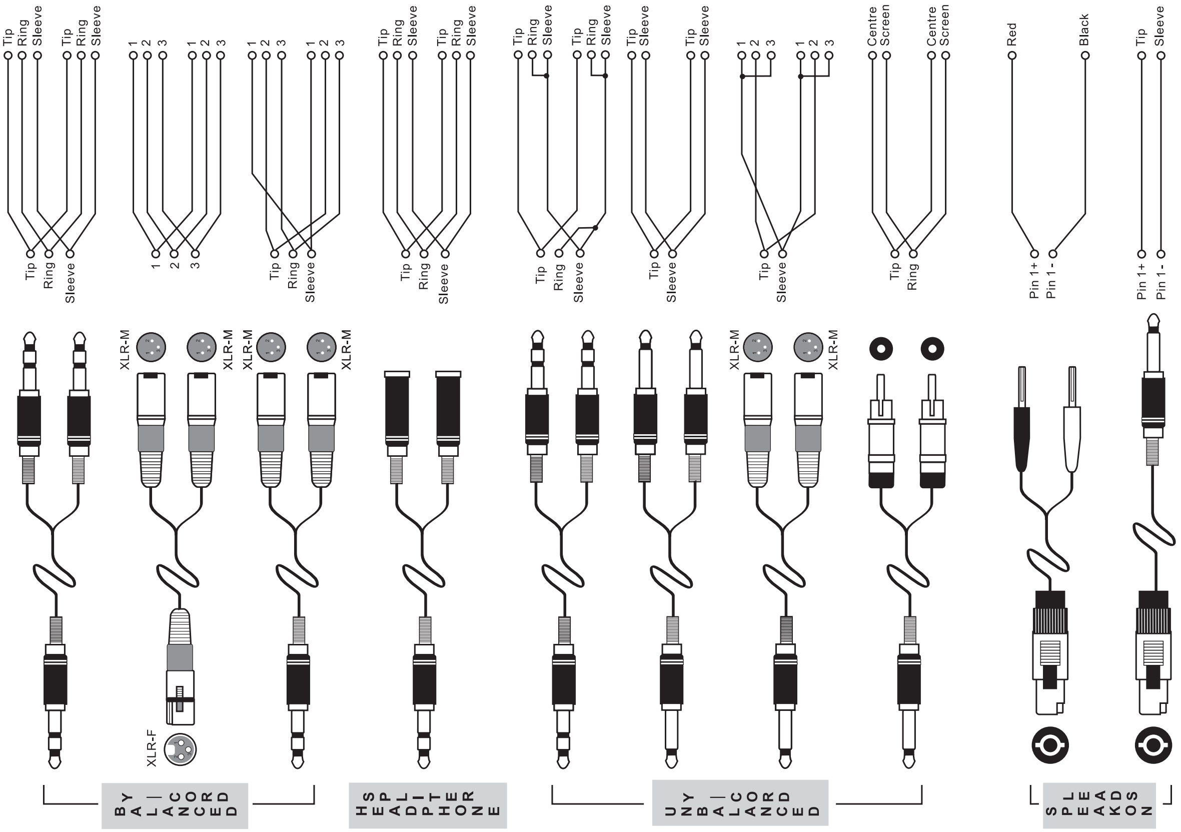
- 4 balanced Mic/Line input channels with 3-band EQ
- 4 stereo inputs
- Additional 2T return inputs, for tape input or link to submixer, can be routed to MAIN l/R and CTRL RM/Headphones
- Global +48V phantom power switch for channle 1~4 on master section
- Pre-Fader AUX, post-fader EFX sends on every input channel
- REC output
- 10 segement level meter and switch for MAIN L/R and Headphones
- CTRL RM/Headphones output with volume control
- Peak indicator and low pass filter on each mono input channel
- Pan control on mono channel and balance control on stereo input channel
- 60mm fader control for MAIN L/R output
- Balanced MAIN L/R output

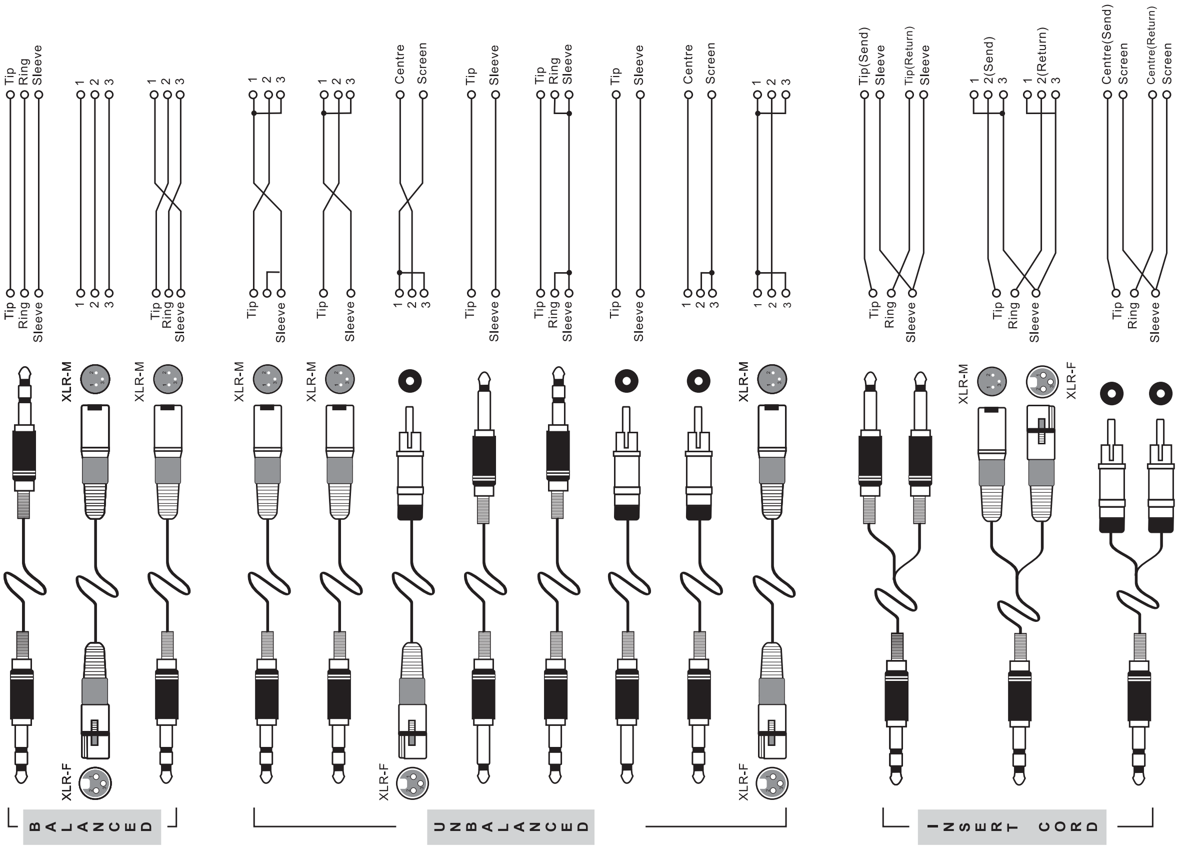
GETTING STARTED

1. Check the Ac voltage before con-necting the AC plug. This product is equipped with a 3-wire grounding type plug; this is a safety feature and should not be defeated. Proper grounding is a necessary practice to prevent electric shock hazards to the operator, the microphone user, and the musicians who are wired to this unit.
2. before switching on the main power, keep all the outptu faders or level control knob all the way down/left to prevent damage of excessive noise caused by bad level adjustment, wrong wiring, defective cables, or bad connection.
3. Always turn on the mixer before you turn on the power amplifier; turn off the mixer after you turn off the amplifer.
4. Always trurn off the unit before connecting or disconnecting the unit from the power source.
5. Never use solvents to clean the unit; clean it with a soft, dry cloth.


STAGE MONITORS
POWER AMP
GRAPHIC EQ
PA SPEAKERS
RIGHT
LEFT
CTRL RM MONITOR
GUITAR
VOCAL MIC
Bass Guitar
Bass AMP
POWER AMP
POWER AMP
GRAPHIC EQ
GRAPHIC EQ
DIRECT BOX
EFFECT PROCESSOR
1
2
3
4
AUXOUT
EFXOUT
MAIN
PHONIC
MM1202a
CTRL RM
MIC
LINE
5/6
7/8
9/10
EFX RTN 11/12
L (MONO)
R
REC
2T RTN
L
R
AUDIO CASSETTE
KEYBOARD,SYNTHESIZER,SAMPLER
DVD PLAYER
DRUM MACHINE

WARING!
Mute the EFX knob
on channel 9/10(MM1002a)
or channel 11/12(MM1202a)
to avoid feedback


Tip
Ring
Sleeve
1
2
3
XLR-M
XLR-F
Centre
Screen
Red
Black
Pin 1+
Pin 1 -
BALANCED Y CORD
HEADPHONE SPLITTER
UNBALANCED Y CORD
SPEAKON LEADS


Tip
Ring
Sleeve
1
2
3
XLR-M
XLR-F
Centre
Screen
Tip(Send)
Tip(Return)
2(Send)
2(Return)
Centre(Send)
Centre(Return)
BALANCED
UNBALANCED
INSERT CORD

UNBALANCED & BALANCED

Most of the mistakes in audio installations are due to incorrect and/or defective audio connections. In order to perfectly complete your installation, please pay special attention to the following section unless you are already familiar with balanced/unbalanced operations.

WHAT IS AN UNBALANCED LINE?

You can find this kind of system in most of home audio-video systems. They have one conductor to carry signal, and another conductor for a ground. Normally, for lower level signals, the ground conductor shields the signal conductor.

WHAT IS A BALANCED LINE?

A balanced system transmits signal via two conductors plus one ground shielding conductor. The two signal conductors carry the same signal but out of phase. For the balanced input stage, the amplifier will boost the difference between the two signal conductors and remove the identical part (known as common mode signal) of the two signals. Because the real signal is carried by the two conductors out of phase, so it is perfectly carried to the input. At the same time, interference that occurs during transmission will be identical (common mode). Because the signal conductors are run together, there is no chance they can be different, and all the interference will be removed by the balanced input amplifier.

THE DIFFERENCE BETWEEN TWO OPERATIONS

Because of the common mode interference immunity of a balanced system, the ground conductor does not need to carry any electrical current, which means the ground of the two connected units has an identical ground level which is vital to an interference free system. Let us look back at the unbalanced system. The signal electrical current goes from the signal conductor to the ground conductor. The ground level of the two connected units are not identical. This means the system is more easily inclined to noise interference.

Running long cables is easy for a balanced system but difficult for an unbalanced one. A Lower noise level is a characteristic of a balanced system.

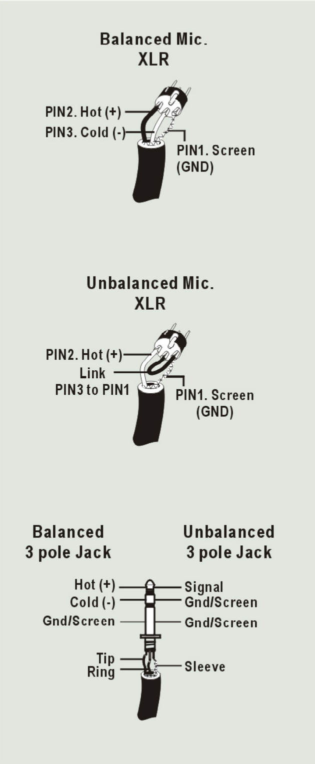
Because a balanced system needs two conductors for the signal and one conductor for the ground, a minimum of three conductors are needed for wiring a balanced system. Therefore, a dedicated system separates the ground and shields the two conductors.

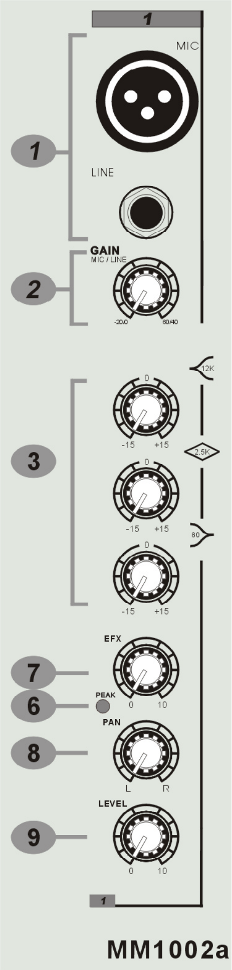
Please read following section to properly wire for balanced and unbalanced systems:

THE CORRECT WIRING FOR BALANCED OPERATION

Always connect the main power with three plugs. Make sure the power system ground is working properly. Do not use a ground insulator plug adapter without properly connecting the ground individually. This is vital to making a successful audio system connection.

Always connect the ground pin (PIN 1 in XLR) to the source unit, and disconnect this pin on the destination unit. This connection topology is to avoid creating a grounding loop between the signal and power ground. Utilize only the power ground, be-


Balanced Mic.
XLR
PIN2. Hot (+)
PIN3. Cold (-)
PIN1. Screen (GND)
Unbalanced Mic.
XLR
PIN2. Hot (+)
Link PIN3 to PIN1
PIN1. Screen (GND)
Balanced 3 pole Jack
Unbalanced 3 pole Jack
Hot (+)
Cold (-)
Gnd/Screen
Signal
Gnd/Screen
Gnd/Screen
Tip
Ring
Sleeve


1
MIC
1
LINE
GAIN
MIC / LINE
2
-20/0
60/40
12K
2.5K
80
3
0
-15 +15
EFX
7
PEAK
6
PAN
8
L R
LEVEL
9
0 10
1
MM1002a

cause it always has a lower resistance and better distribution than the signal ground.

If there is hum, one possible reason is a bad ground connection for the system. In case you cannot find the fault, try connecting the ground pin of the input connectors. If the hum is reduced or eliminated, check your power grounding system. Special attention is needed when you use the equipment racks with some distance between them, and/or use a large quantity of power amplifiers. Check the power ground between the racks and power distribution strips with your electrical supply engineer. Make sure there is one, and only one, proper ground point for the audio system (or connected video system).

INPUT CHANNEL DESCRIPTION

1 MIC / LINE

MM1002a (Ch1~2) /

MM1202a (Ch1~4)

MIC

The microphone is via an XLR connector. Please use only professional low impedance microphone and properly wired the cable for best result.

LINE

The unbalanced 1/4" TS phone jack accepts line level signal from keyboards, synthesizer, sampler, CD, or tape recorder. Tip is hot(+) and sleeve is ground.

2 GAIN

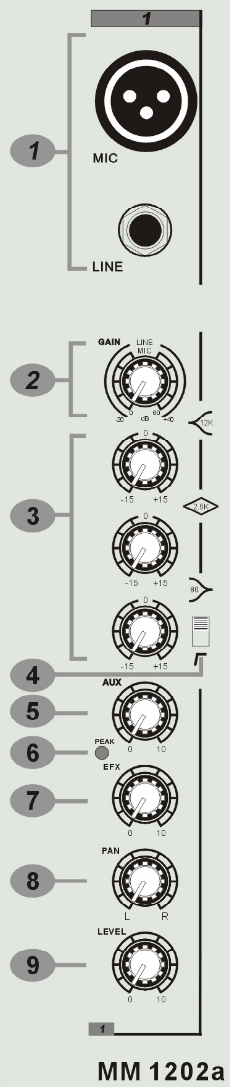
This rotary knob adjusts the channel signal level. If too high, the signal will distort as it overloads the channel; too low, the level of back hiss will be even noticeable and there might be insufficient signal level to the output of the mixer. Proper gain setting allows the mixer to work in the best operating level, adjusts the gain when signal presents to the highest level without triggering the peak LED. That is the most appropriate position.

This gain has two kinds of indication to suit mic or line input, when you use mic input, please read inside ring from 0~+60 dB, if you use line input, please read the outside ring from -20~+40dB.

3 3-Band EQUALIZER

HIGH

Turn right to boost high frequency, adding crispness to cymbals, vocals and electronic instruments. Turn left to cut this frequency, reducing sibilance or hiss. The control has a shelving response that gives 15dB of boost or cut at 12KHZ.



MID

The knob provides 15dB of boost or cut at 2.5KHz, just like the HF EQ knob. The mid band covers the range for most vocals. Listen carefully when using this control and find how particular characteristics of vocal or guitar signal can be enhanced or reduced .Set the upper knob in the 0 position when not required.

LOW

The control has shelving response that gives 15dB of boost or cut at 80Hz. Adding warmth to vocals or extra punch to guitars, drums and synths by turning to the right. Turn left to reduce stage rumble, hum or to improve a mushy sound.

These equalizers are designed to accommodate different room acoustics, feedback control and to improve live PA sound. No amount of equalization will correct the frequency response curve of a poor loudspeaker, however. Always begin with all control at the 0position and avoid excessively cutting/boosting large segments of the peculiar frequency. Thus, would limit the system dynamic range or increase the possibility of the unpleasant feedback sound. To make sound more impressive, dynamic process is necessary.

4 LOW CUT (MM1202a ONLY)

Slide down the slide-switch; insert the 18dB per octave 75Hz low cut filter in the signal path. This low cut filter is useful on live vocals to reduce stage rumble or popping from microphones. It can also be used to cut off low frequency hum.

5 AUX (MM1202a ONLY)

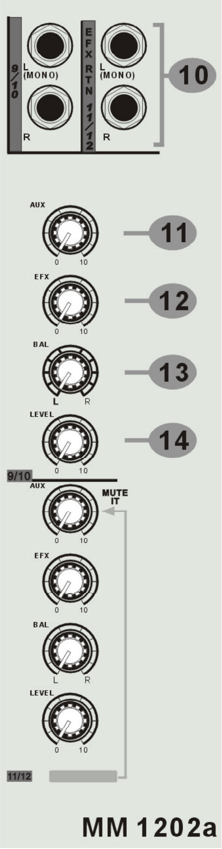
This rotary fader sends out the channel signal, before channel LEVEL knob control, to AUX bus. The signal is pre-fader so that the aux send is independent of the channel LEVEL knob control; this is suitable for foldback or monitor.

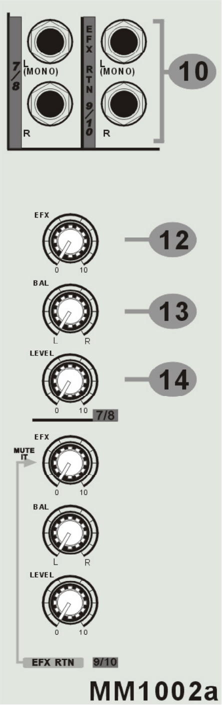
6 PEAK

This red LED will warn you when an excessively high signal level is present in the channel. The signal is sampled at two points in the channel, immediately after/before the HPF and equalizer. The peak LED will illuminate approximately 6dB before clipping and therefore give warning of a possible overload.

7 EFX OUT

This rotary fader feeds the channel signal, which is post-fader, to external effect. This is very helpful in simultaneously adjusting the level of the processed signal.





8 PAN

This control sets the amount of the channel signal feeding the left and right mix bus and allows you to locate the source smoothly across the stereo image.

9 LEVEL

A rotary fader determines the proportion of the channel in the mix and provides a clear visual indication of channel level.

10 STEREO INPUT

(EFX RETURN)

These high impedance inputs accept 2-pole phone jacks. Use these inputs for keyboards, drum machines, synths, tape machine or processing units. If the source signal is mono, please plug into the left channel socket only.

You can use one stereo input channel (9/10 for MM1002a, 11/12 for MM1202a) for external effect processor. Connect EFX OUT to an external effect processor, and then send the processed signal back to the selected stereo input channel as effect return. Avoid feedback loop by muting the EFX rotary knob on this effect return channel.
WARING: the EFX knob on this selected stereo channel has to be muted when using as an effect return channel.

11 AUX (MM1202a only)

This control knob determines the output level of this channel sent to the AUX master.

12 EFX

This control konb determines the output level of this channel sent to the EFX master.

13 BAL (BALANCE) CONTROL

The BALANCE control sets the amount of the channel signal feeding the MAIN mix output, and allows you to balance the source in the stereo image. When the control knob turns fully to the left or right, you send only that side of the signal to the mix.

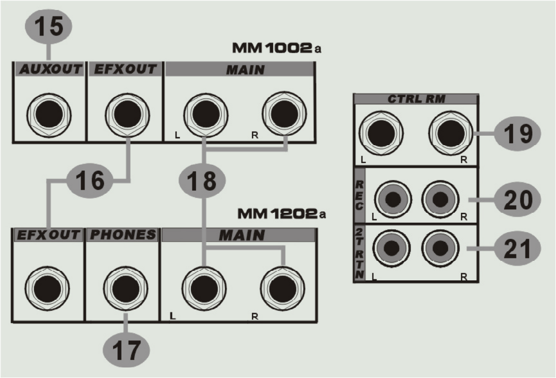
14 LEVEL

A rotary fader determines the proportion of the channel in the mix and provides a clear visual indication of channel level.

OUTPUT CONNECTION & MASTER SECTION

15 AUX OUT (MM1202a ONLY)

This socket sends out the signals from aux bus.



16 EFX OUT

This socket sends out the signals from mix bus.

17 PHONES

This socket sends out the signals to your headphone for monitoring. On MM1002a, it is located on the connecting panel section, while on MM1202a under the MAIN L/R fader.

18 MAIN OUT

These sockets send line level balanced signals from the mixer to external devices (for example: EQ or a power amplifier).

19 CTRL RM

This jack socket sends the unbalanced mix signals to the control room speakers.

20 REC

The signals are sent to the tape recorder via the associate RCA sockets.

21 2T RTN

These two RCA jacks are for the 2T tape return to the mixer.

22 LED LEVEL METERS

LED meter shows the level of master mix of MAIN L/R or of the CONTROL ROOM. There are five segments for MM1002a, while MM1202a has 10-segment LED level meter.

23 2T RTN SIGNAL PATH SELECT BUTTON

Pushing down the right button feeds the 2T RTN signals into MAIN L/R output. Pushing down the left button feeds the 2T RTN signals into control room monitors and headphones. If EFX button (MM1002a) or AUX button (MM1202a) are pressed, the CTRL RM monitor output is then replaced by EFX/AUX.

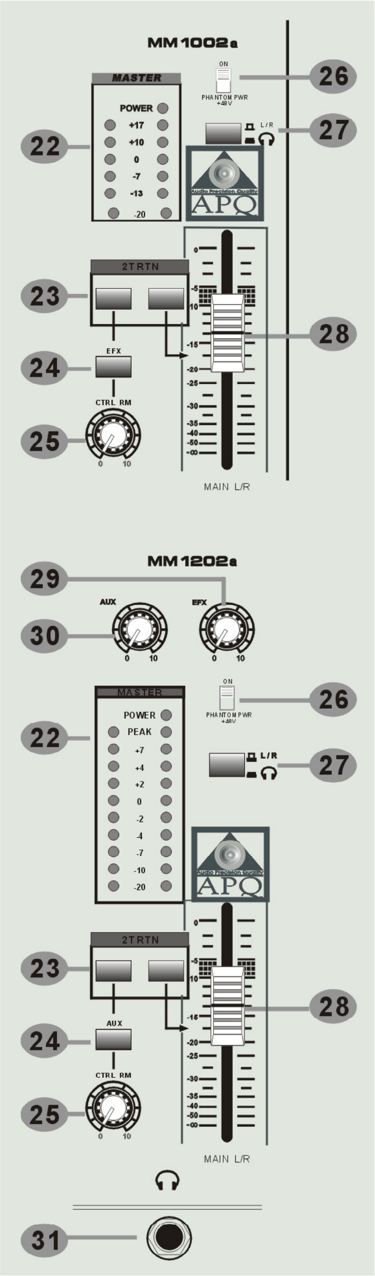
24 AUX (MM1202a) / EFX (MM1002a) SIGNAL PATH SELECT BUTTON

AUX (MM1202a)
Push the button to feed the AUX signal to the control room monitors and headphones.
EFX (MM1002a)
Push the button to feed the EFX signal, to the control room monitors and headphones.
If both 2T RTN to CTRL RM and AUX/EFX button are pressed at the same time, the 2T RTN signal will be replaced by AUX/EFX signal.

25 CTRL RM

This rotary fader determines the output level to the control room monitors and headphones.

26 +48V PHANTOM PWR


MM1002a
MASTER
POWER
+17
+10
0
-7
-13
-20
ON
PHANTOM PWR +48V
L/R
APQ
Audio Precision Quality
2TRTN
EFX
CTRL RM
0
10
MAIN L/R
22
23
24
25
26
27
28
MM1202a
29
30
AUX
EFX
POWER
PEAK
+7
+4
+2
0
-2
-4
-7
-10
-20
AUX
31

This slide-switch turns the master phantom power on and off. Condensor microphone needs phantom power.

48V PHANTOM POWER

+48V Phantom Power is available on each microphone input channel. All faders should be all the way down when switching on/off the phantom power, in order to prevent excessive noise to stage monitor speakers and main speakers; Phantom powered mics should not be plugged in with the +48V switched on.

27 HEADPHONES / STEREO INDICATION SELECT BUTTON

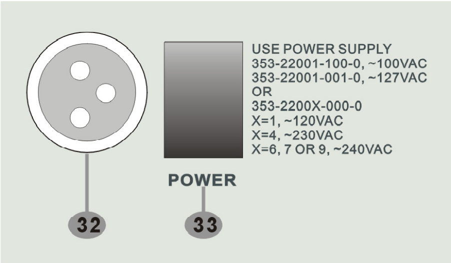
Push down the meter to show headphone level, release it to show the main stereo output level.

28 MAIN L/R FADER

This 60mm long fader determines the output level of MAIN OUT.

29 EFX OUT CONTROL (MM1202a ONLY)

This master EFX level control determines the final level of EFX mixing bus to be sent to external effect processor.


USE POWER SUPPLY
353-22001-100-0, ~100VAC
353-22001-001-0, ~127VAC
OR
353-2200X-000-0
X=1, ~120VAC
X=4, ~230VAC
X=6, 7 OR 9, ~240VAC
POWER
32
33

30 AUX OUT CONTROL (MM1202a ONLY)

This master AUX level control determines the final level of AUX mixing bus.

31 HEADPHONES JACK

This jack sends the mix signal to the headphones.

32 POWER SUPPLY INPUT SOCKET

Connect the power supply unit to this socket. Make sure the power supply unit is not plugged into AC outlet before connecting to the mixer.

33 POWER ON/OFF SWITCH

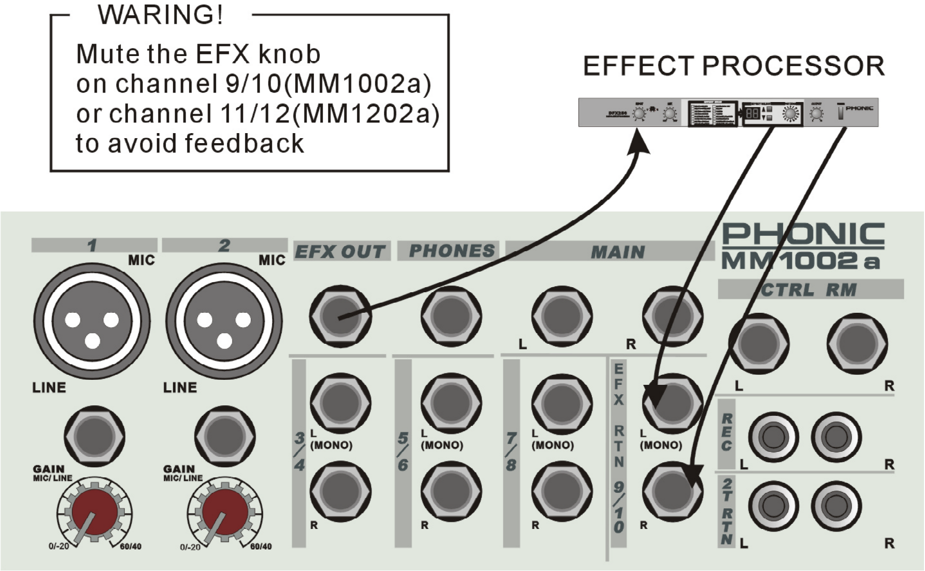
This switch turns the power of the unit on and off. To prevent this unit from damaging, move the MAIN L/R fader all the way down before turning the power.

INITIAL SETUP

The procedure is very important. Even if you do not like to read manuals, please read this section. After you have connected the system, you can begin the initial set up for every input channel. The matching of every input gain to the signal source is crucial. Every detail affects the final output of the mixer. Basically, input sensitivity adjustment, channel fader, and output fader are the main factors. You should try to set only as much microphone gain as required to achieve a good balance between signals. If the input gain is set too low, you will not get enough gain on the faders to push the signal up to an adequate level. If the input gain is set too high, the channel fader will need to be pulled down in compensation, leaving greater risk of feedback because a small fader movement will have a very significant effect on output level. Certainly, the limited fader travel path will not be successful in the mixing procedure. Please use the following set up procedure. Do not turn the output up until they clip and then backing off.

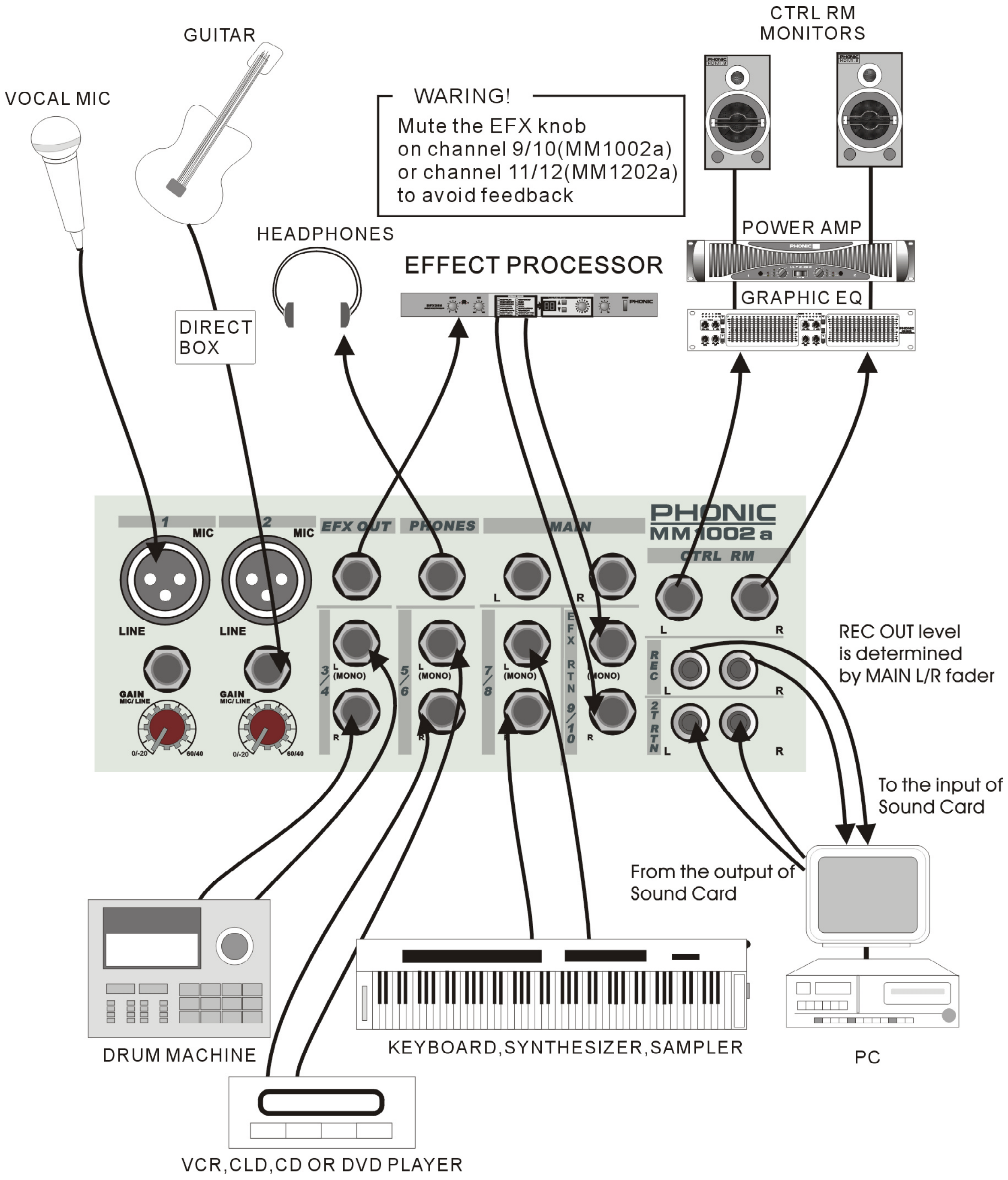
FOLLOW THE PROCEDURE FOR EACH CHANNEL IN USE

- Set all faders and gain controls all the way off.
- Phantom powered microphone should be connected before the +48V is switched on.
- Set power amplifier levels to 70%.
- Set the CTRL RM Level and Headphone level to about 50%.
- If you want to hear what you are doing, plug your headphone into the phone output socket, or hook up your control room amplifier system to the Control Room outputs.
- Set EQ control at center position.
- Set PAN and BALANCE knobs at center position.
- You need a headphone to continue.
- Apply a typical performance level signal, monitoring the level on the LED meter.
- Adjust the input gain until the meter shows in the amber section, with occasional peaks to the first red LED at maximum source level. This allows enough headroom to accommodate peaks and the maximum level for normal operation; you can listen to them through your headphone.
- For microphone sources, the gain control adjustment will depend on the kind of the microphone in use. Normally turn the gain clockwise around 2~3 clock position. Ask the singer to perform aloud and do not whisper. If they do not sing at a normal level while you are doing the sound check, you might drive the mixer to overload or produce feedback by setting the gain too high during the initial set up.
- Repeat this procedure for all other channels. When more channels are added to the mixer, the meters LED may move up to the red section. Adjust the overall level using the master faders if necessary.



WARING!
Mute the EFX knob
on channel 9/10(MM1002a)
or channel 11/12(MM1202a)
to avoid feedback

EFFECT PROCESSOR
1
MIC
2
MIC
EFX OUT
PHONES
MAIN
PHONIC
MM1002a
CTRL RM
LINE
GAIN
MIC/ LINE
0/-20
60/40
L
R
3/4
5/6
7/8
(MONO)
EFX RTN 9/10
REC
2T RTN

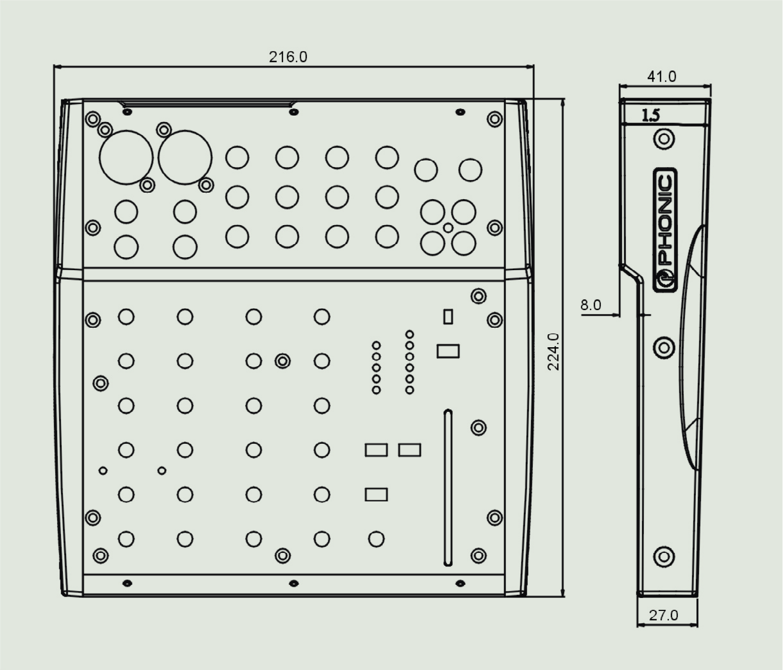

CTRL RM MONITORS
GUITAR
VOCAL MIC
HEADPHONES
EFFECT PROCESSOR
POWER AMP
GRAPHIC EQ
DIRECT BOX
1 MIC
2 MIC
EFX OUT
PHONES
MAIN
PHONIC MM1002 a
CTRL RM
LINE
LINE
GAIN MIC/ LINE
0/-20
60/40
3/4
5/6
7/8
L (MONO)
R
EFX RTN 9/10
REC
2T RTN
L
R
DRUM MACHINE
KEYBOARD,SYNTHESIZER,SAMPLER
PC
VCR,CLD,CD OR DVD PLAYER

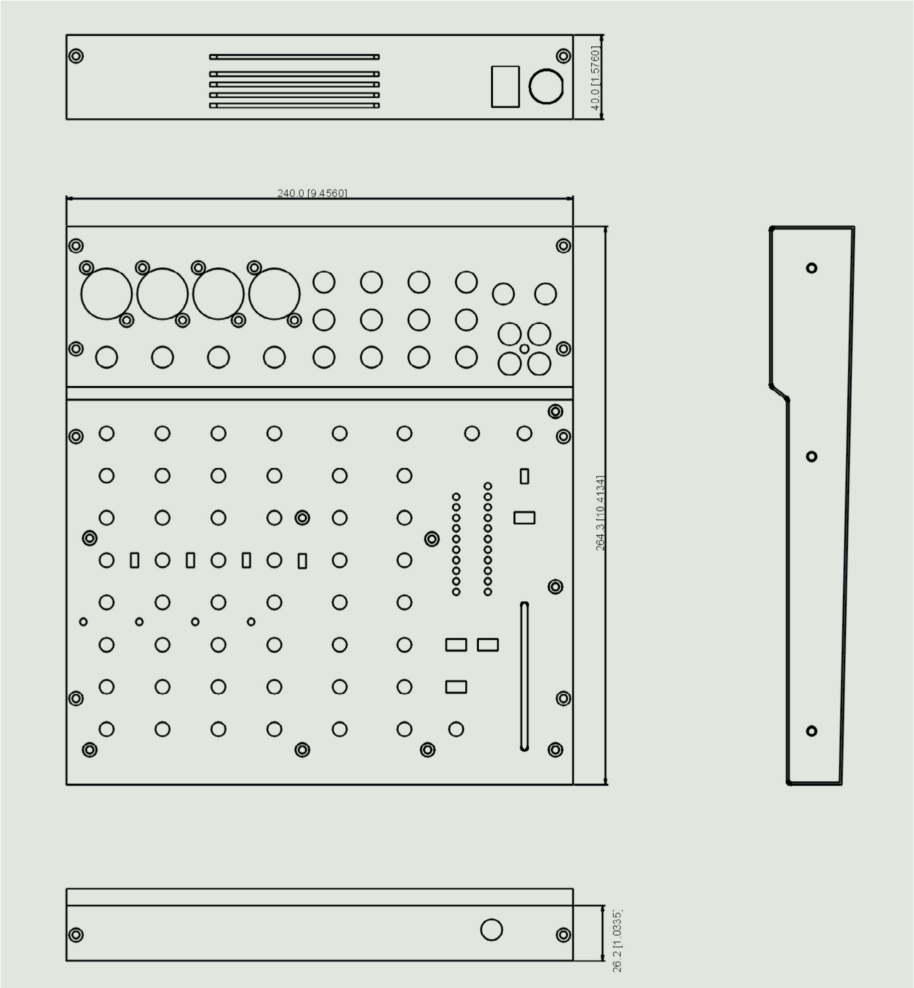
WARING!
Mute the EFX knob
on channel 9/10(MM1002a)
or channel 11/12(MM1202a)
to avoid feedback

REC OUT level is determined by MAIN L/R fader

To the input of Sound Card

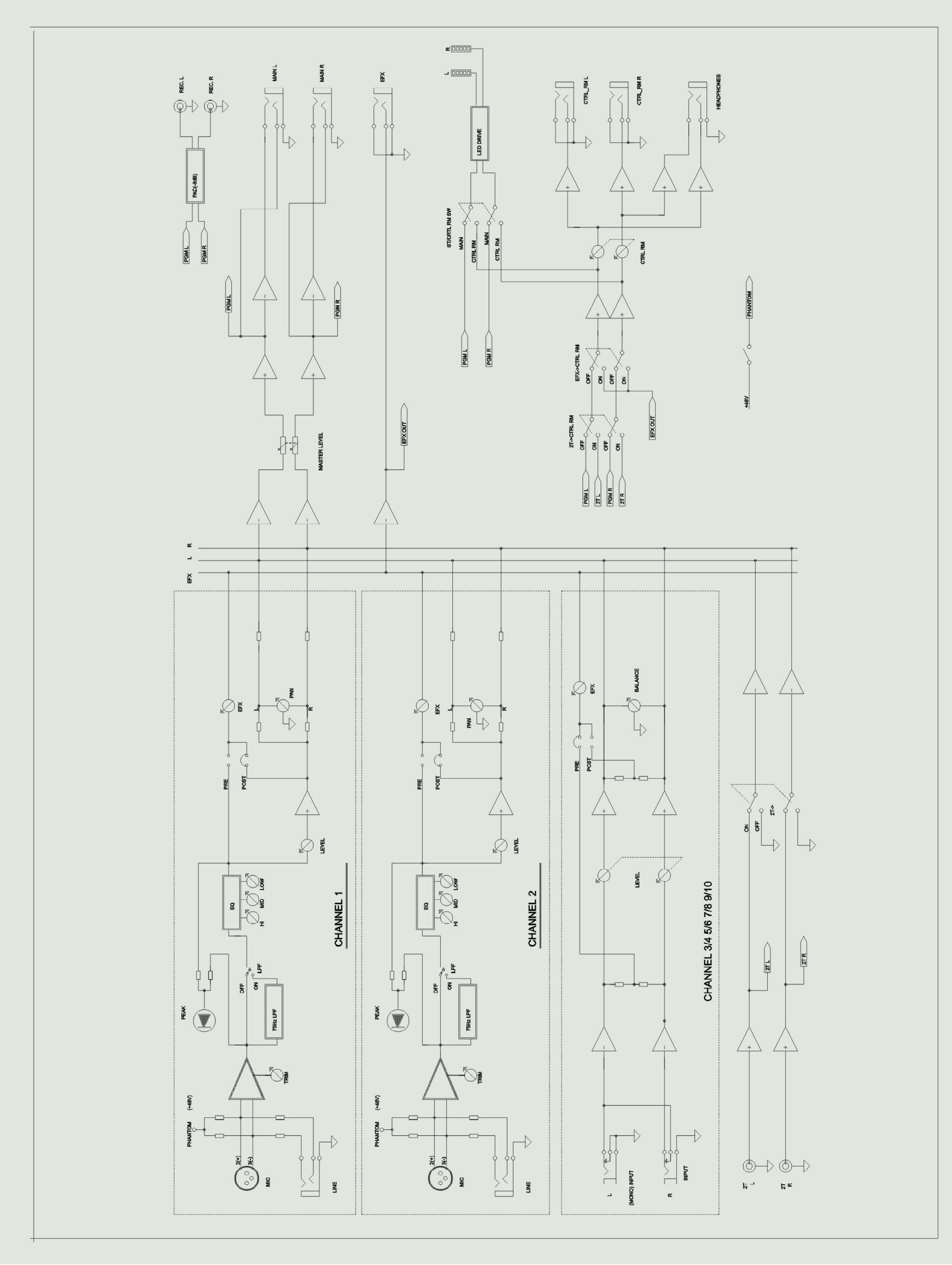
From the output of Sound Card

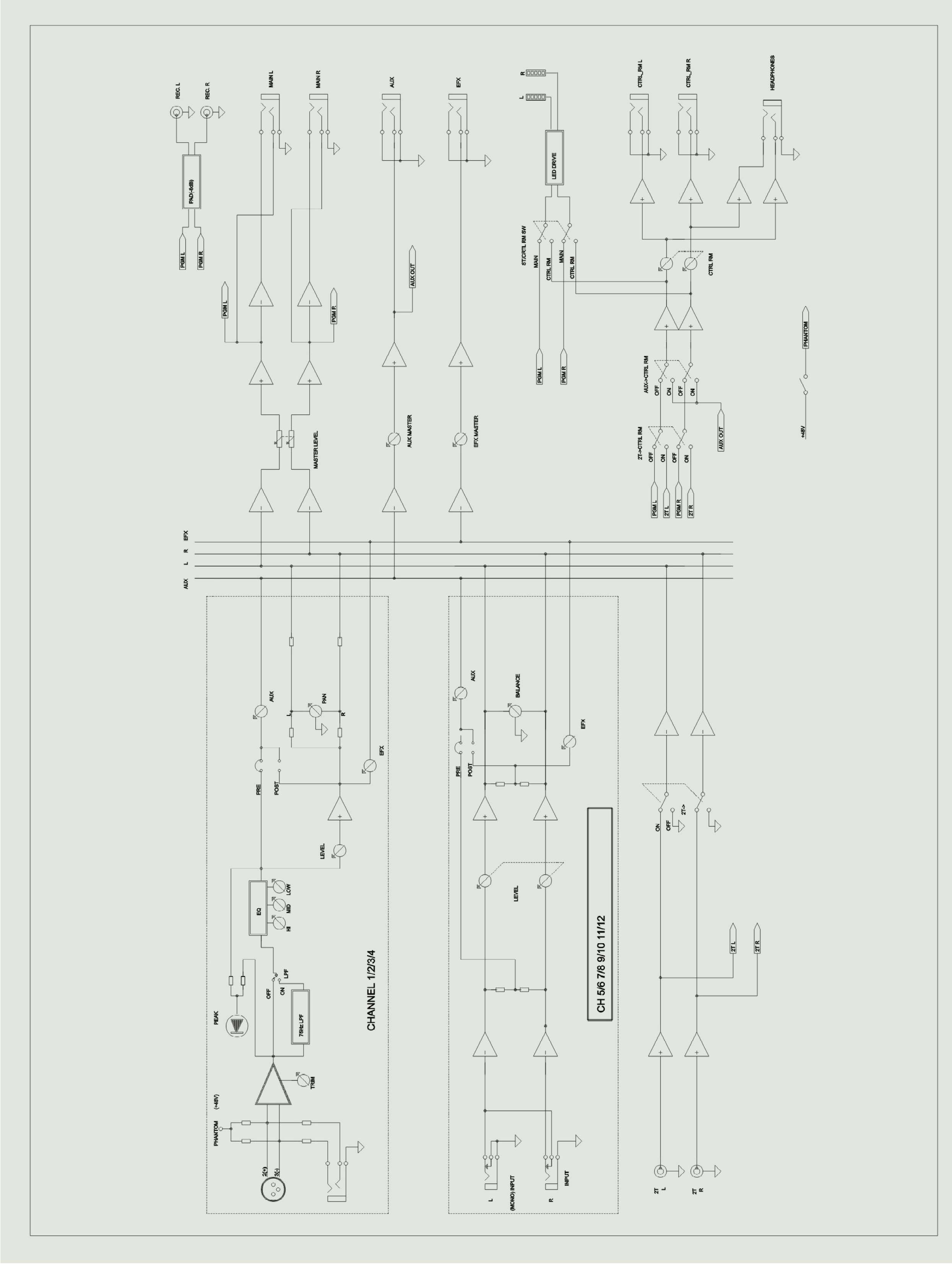

216.0
41.0
1.5
PHONIC
8.0
224.0
27.0


40.0 [1.5760]
240.0 [9.4560]
264.3 [10.4134]
26.2 [1.0335]

Measurements are shown in mm / inch

	MM1002a	MM1202a
Inputs		
Balanced Mono Mic/Line channels	2	4
Balanced Stereo Line Channels	4	4
2T input	1	1
Outputs		
Main L/R stereo	TRS, Bal.	TRS, Bal.
Aux sends	2, TRS, Unbal.	2, TRS, Unbal.
Phones	1	1
Control RM	TRS, Unbal.	TRS, Unbal.
Channel Strips	4	6
AUX / EFX	1	2
Pan/Balance control	Yes	Yes
Volume Controls	Rotary	Rotary
Master Section		
Aux send masters(EFX SEND for MM1002a)	1	2
Master Aux send Solo(EFX SEND solo for MM1002a)	Yes	Yes
Phones/Control RM Level Control	Yes	Yes
Phones/Control RM Source Switching.	Yes	Yes
Faders	ST/60mm	ST/60mm
Metering	HEADPHONES/ST	HEADPHONES/ST
Number of channels	2	2
Segments	5	10
Phantom Power Supply	+48VDC	+48VDC
Switches	Master	Master
Noise (20Hz to 20KHz bandwidth, line inputs to main L/R outputs, all channels assigned, panned		
Master @ unity, channel fader down.	-89dBu	-89dBu
Master @ unity, channel fader @ unity.	-86dBu	-86dBu
S/N ration, ref to +4	>90dB	>90dB
THD (Any output, 1KHz @ +14dBu, 20Hz to 20KHz, channel inputs)	<0.005%	<0.005%
CMRR (1 KHz @ -60dBu, Gain at maximum)	80dB	80dB
Crosstalk (1KHz @ 0dBu, 20Hz to 20KHz bandwidth, channel in to main L/R outputs)		
Channel fader down, other channels at unity	<-83dB	<-83dB
Frequency Response (Mic input to any output)		
20Hz ~ 20KHz (Gain min.)	1dB	1dB
20Hz ~ 20KHz (Gain max.)	1dB	1dB
Maximum Levels		
Mic preamp input	+10dBu	+10dBu
All other inputs	+22dBu	+22dBu
Un-balanced outputs	+22dBu	+22dBu
Headphone output	-4dBu	-4dBu
Impedances		
Mic preamp input	2 KΩ	2 KΩ
All other inputs	10 KΩ	10 KΩ
RCA 2T outputs	1.1K Ω	1.1K Ω
All other outputs	100Ω	100Ω
Equalization	3-band, +/-15dB	3-band, +/-15dB
Low EQ	80Hz	80Hz
Mid EQ	2.5KHz	2.5KHz
Hi EQ	12KHz	12KHz
Low cut filter	N/A	75Hz(-12dB/oct)
Microphone Preamp E.I.N. (150 ohm terminated, max gain)	<129.5dBm	<129.5dBm
Power Consumption	20 watts	20 watts
Weight	1.5 kg (3.3 lbs)	3 kg (6.6 lbs)
Dimensions (WxHxD)	190x56x233 mm (74.8"x22.0"x91.7")	240x56x276 mm (94.5"x22.0"x108.7")


REC. L
REC. R
PAD(-8dB)
PGM L
PGM R
MAIN L
MAIN R
EFX
EFX OUT
MASTER LEVEL
R
L
LED DRIVE
ST/CRTL RM SW
MAIN
CTRL RM
CTRL_RM L
CTRL_RM R
HEADPHONES
CTRL RM
EFX->CTRL RM
OFF
ON
2T->CTRL RM
2T L
2T R
PHANTOM
+48V
EFX
PAN
PRE
POST
LEVEL
EQ
LOW
MID
HI
LPF
75Hz LPF
PEAK
TRIM
PHANTOM
(+48V)
2(+)
3(-)
MIC
LINE
CHANNEL 1
CHANNEL 2
BALANCE
(MONO) INPUT
INPUT
CHANNEL 3/4 5/6 7/8 9/10
2T->
2T


REC. L
REC. R
PAD(-6dB)
PGM L
PGM R
MAIN L
MAIN R
AUX
EFX
AUX OUT
R
L
LED DRIVE
ST,CRT'L RM SW
MAIN
CTRL RM
CTRL_RM L
CTRL_RM R
HEADPHONES
CTRL RM
PHANTOM
+48V
AUX->CTRL RM
OFF
ON
2T->CTRL RM
2T L
2T R
MASTER LEVEL
AUX MASTER
EFX MASTER
AUX
L
R
EFX
PAN
PRE
POST
LEVEL
EQ
HI
MID
LOW
PEAK
LPF
75Hz LPF
TRIM
PHANTOM
(+48V)
2(+)
3(-)
CHANNEL 1/2/3/4
BALANCE
L
(MONO) INPUT
R
INPUT
CH 5/6 7/8 9/10 11/12
2T->
2T L
2T R

PHONIC
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